The social and budgetary impacts of recent social security reform in Belgium

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Summary

This paper discusses the impact of recent pension reform (including the conventional early leavers' scheme) and reform of the general unemployment scheme on the development of sustainability as well as adequacy in Belgium. The impact analyses in this paper have been done using two separate yet consistent models. The analysis of the budgetary impact is based on the MALTESE system of models. The analysis of the adequacy of social security reform is done using the most recent version of the dynamic microsimulation model MIDAS.

The structural reforms of December 2011 reduce the budgetary cost of ageing by 0.3 percentage point of GDP between 2011 and 2060, evenly distributed between pensions, unemployment and CELS/UCA. Besides the direct impact of the measures themselves, the increased GDP that results from the reform of course decreases the weight of the social expenses in percent of GDP.

The risk of poverty rate of retirees decreases progressively as a result of the reform. In 2060, the reduction reaches 4 percentage points (4 percentage points for the men and 5 percentage points for the women).Furthermore, the poverty risk of especially male unemployed increases considerably.

Keywords: Social security reform, Belgium, financial sustainability, adequacy, poverty.

Contents

1. Introduction

For many western countries, population ageing constitutes an important budgetary and social challenge. They – including Belgium – are therefore taking measures to deal with the issue. The Belgian governmental agreement of December 2011 included a social security reform which came into force in 2012 for certain aspects.

The aim of these measures is primarily to strengthen the sustainability of the first-pillar pension system, especially through limiting early retirement. However, such a series of measures inevitably also has consequences on the adequacy of pension benefits in the first pillar. The question then is how important these impacts are.

This paper aims to discuss the impact of recent social security reform on the development of sustainability as well as adequacy in Belgium. It is based on the most recent report of the Study Committee for Ageing (High Council of Finance 2012), for which the team "Social protection, demography and prospective" of the Federal Planning Bureau produces and simulates the various scenarios.

The impact analyses in this paper have been done using two separate yet consistent models. The analysis of the budgetary impact of pension reform (including the conventional early leavers' scheme) and general unemployment scheme is based on the MALTESE system of models, which is a composition of accounting models used to translate demographic and economic projections into budgetary developments. The analysis of the adequacy of social security reform is done using the most recent version of the dynamic microsimulation model MIDAS. This model simulates the lives of actual individuals and households in Belgium, starting from a representative administrative sample of about 2.2 million individuals in 2001. A discerning character of MIDAS is that it aligns to the simulation results of MALTESE. Consistency between the two models is achieved through various channels, previously described in Dekkers, Inagaki and Desmet (2012), which will be outlined.

The paper will report on the results of this joint analysis of recent social security reform in Belgium. Thus, the projected budgetary impacts will be discussed along with the impact on the evolutions of the adequacy of pensions and unemployment benefits in Belgium. The former will focus on the labour market, the macro-economic environment and the social expenditures. The latter uses social indicators like poverty risks, inequality and (re)distribution indicators for the population as well as for specific groups.

This introduction ends with the discussion of a caveat. Besides pension reform, the Di Rupo administration has also introduced a.o. reform in the unemployment and career break schemes. See High Council of Finances (2012, pp. 44-46) for an extended discussion. These of course also have their budgetary impact which will be briefly presented in the dedicated section. But the impact of unemployment reform on the adequacy of pensions (and vice versa) is at best indirect, namely via changes of the poverty line, and via the impact of the unemployment benefit on the equivalent household income of pensioners – and hence only for households that contain both pensioners and unemployed. The former effect will obviously be considerably stronger than the latter and this will

distort the comparison. To prevent this distortion, the impact of the reform of the pension system (including conventional early leavers' scheme) is considered on the poverty risk of the pensioners only, while the impact of the reform of unemployment and career break schemes is expressed in terms of its impact on the poverty risk of the unemployed only.

Section 2 of this paper concerns the description of the recent social security reform in Belgium. The two models used to estimate the budgetary and the social impact of the reform are presented in the third section. Section 4 illustrates the budgetary impact of the structural reforms while section 5 analyses the social impact of the reforms.

Seeing that the reform is very recent, there is not much work on the assessment of its consequences to date. A recent paper by Alain Jousten, Sergio Perelman, Fabio Sigismondi, and Ekaterina Tarantchenko (2012) is the most notable exception. This paper aligns with theirs in the joint assessment of the impact of reform on macroeconomic aggregates, but also on individuals. Furthermore, their microsimulation model and ours is based on essentially the same administrative dataset.

Their work however differs in various respects from ours. First of all, they use static microsimulation techniques to express the impact of reform in 'accrued to date pension rights', i.e. the discounted pensions rights that would be due if the system were shut down today. This paper on the other hand uses dynamic macro modelling jointly with dynamic microsimulation to a forward-looking approach, taking into account the intertemporal impact of the reform and how reform changes "the future generosity of these programs" (Fernández, 2012, 78). Secondly, our approach is conceptually simpler in that we simulate the intertemporal development of the poverty risk of pensioners, respectively unemployed in a base scenario and its counterfactual. Third and most importantly, the above study chooses to "focus on a set of hypothetical reform scenarios rather than follow the reform as recently initiated by the Di Rupo government" (op. cit., 22), whereas our paper pertains to the budgetary and social impacts of recent *actual* social security reform.

2. Recent social security reform in Belgium

Belgium has a Bismarckian-style first-pillar pension system, toned down by several floors, ceilings and a means-tested minimum pension benefit (an assistance scheme named the guaranteed income for the elderly). Besides this assistance scheme, there are three main separate schemes: wage earners (in the private sector as well as the contract employees in the public sector), civil servants and self-employed.

The last important pension reform was the reform of 1996 for wage earners and self-employed workers. It is dicussed in Festjens (1997) and aimed mainly at gradually increasing the retirement age of women (from 60 to 65 by 2009). Early retirement (from the age of 60) was submitted to a career condition of 35 years as from 2005. A "minimum claim per working year" was introduced in the wage earners' scheme.

Afterwards, the scheme of guaranteed income for elderly persons (GIEP) was reformed on 1 June 2001 with the individualization of the allowance. The basic amount of the guaranteed income has been increased significantly since the reform of 2001. For instance, in an attempt to safeguard the adequacy of first-pillar pensions, the Leterme administration in 2006 increased the GIEP and the minimum claim per working year by about 14% (Whitehouse et al., 2009, 519). The impacts of these measures on pension adequacy and sustainability are discussed in De Vil et al. (2010) and Dekkers et al (2012) and therefore fall outside the scope of this paper.

After a prolonged period of political stalemate, the Di Rupo administration in the law of December 28th, 2011 introduced a number of measures on the reform of the first-pillar pension system, the unemployment scheme for older wage earners, and the general unemployment benefit system in Belgium[i]. According to the most recent projections of the Study Committee for Ageing of October 2012, the budgetary costs of pensions[ii] without the recent reform would increase by 4.7% of GDP between 2011 and 2060. This together with an historical low participation rate of older people in Belgium, are the main motivations behind recent reforms.

This section will discuss these measures, including a number of amendments and complements[iii]. The next sections will then assess the impacts on the sustainability as well as adequacy of the first-pillar pension system (including CELS) and the unemployment system.

Most OECD countries adopt three routes to reducing pension expenditures (OECD, 2012, 30; see also Whitehouse et al., 2009): reduced indexation of benefits, increased legal retirement age and tighter rules for early retirement. The first two pathways have not been taken (yet) in Belgium, and policy has focused on adapting the rules for calculating the benefit at retirement and reducing the possibilities for early retirement.

The discussion of pension reform in Belgium starts with the latter. Before 2013, early retirement was possible for wage earners and self-employed from 60 years with a career of at least 35 years. With the reform, this minimum age is gradually being increased by steps of 6 months per year, until reaching 62 years in 2016. The minimum career length for early retirement also increases from 35 career years to 38 career years in 2013, and then gradually by one extra career year per calendar year, until reaching

40 career years in 2015. Before the reform, civil servants were not subject to an explicit career length condition for early retirement. The majority of them[iv] now become subject to the same conditions as wage earners and self-employed.

The second pathway pertains to adapting the rules for calculating the benefit at retirement. The pension benefit a wage earner is entitled to at retirement is a function of the length of the career and the average uprated past earnings. Periods of inactivity due to unemployment, disability and illness, career breaks, conventional early leavers' scheme (CELS; cf. infra) are taken into account – to a limited extent – as "equivalent periods". These periods therefore are added to the length of the career. Since there by definition are no earnings for these periods, fictitious 'equivalent' earnings are used instead. Before 2013, these were the last earnings before becoming inactive, uprated with the price index. As a result of the 2013 reform, the equivalent earnings equal the minimum claim per working year for those that are long-term unemployed or some CELS.

In the pension scheme for self-employed, a penalty reduces the pension benefit if the self-employed retires before the age of 65. Before 2013, a self-employed that retired at 60, the first age at which early retirement is possible, lost 25 percent of its pension benefit. If one retired at a later age, the penalty was lower, 18 or 12 percent. From 2013 on, this penalty is abandoned for those self-employed that are at least 63 or who have a long career in any pension system. Furthermore, for the others, the reduction tariff or penalty is reduced[v].

A first measure in the pension scheme for civil servants is a standardization of the categories that fall outside the general scheme. Before the reform, specific categories such as university professors, catholic priests and magistrates were subject to specific rules pertaining to the accrual rate of the pension benefit, or the number of career years after which the full retirement benefit was reached. These specific categories now fall under the general scheme, albeit still with a higher accrual rate.

Secondly, since it pertains to all civil servants that have not reached the age of 50 on January 1st, 2012, the pension benefit is no longer based on the average earnings in the last 5 years before retirement, but on the last 10 years instead. This is so unless the pension benefit resulting from the latter wage-base falls under a predetermined minimum.

Third and analogous to wage earners, the system of 'equivalent periods' in the pension scheme for civil servants is also changed. The general rule that equivalent periods may not exceed 20 or 25 percent (depending on age) of the active periods is maintained. However, possibilities for equivalent periods are extended for those of 50 and older. Finally, an overall cap of 5 years is introduced, except for thematic' career breaks (parental leave, care for a serious ill relative and palliative care).

In this paper, we consider the pension reform in a broad sense, including in it the reform of the "prépension" or conventional early leavers' scheme (henceforth CELS). This is a full-time or part-time unemployment scheme for older wage earners of the private sector where recipients receive an additional benefit from the former employer equal at least to half of the gross unemployment benefit and the net earnings (subject to a cap) in the year prior to layoff. The 2012 reform changes the name of this system to "unemployment with company allowance" (henceforth UCA) and restricts the entry conditions of the system. There is one general system and various specific systems, including one

system for restructuring companies. This paper will only briefly discuss reform in the former. Furthermore, discussion will be limited to the system of full time UCA, because the system of part-time CELS is suppressed by the reform. Before the reform, the standard entry condition in CELS was a minimum age of 60 and a career length of at least 35 years for men, and 28 years for women, a condition which was gradually increasing to 35 years in 2028. For those with a long career of at least 38 years, access to the CELS system was possible from the age of 58 on. As a result of the reform, the minimum age for entry into the UCA increased to 60 and the minimum career length goes up to 40 years. Specific entry conditions for those with long careers are abolished.

The unemployment scheme has also been reformed. This scheme discerns three categories of unemployed: cohabiting with dependants ("chômeurs cohabitants avec charge de famille"), cohabiting (without dependants; “chômeurs cohabitants sans charge de famille") and single (“chômeurs isolés") and three periods of unemployment. To each period corresponds a replacement rate, and period lengths are depending on the length of career before becoming unemployed. The first period of unemployment correspond to the highest replacement rate and the third period to a minimum benefit. Among the three unemployed categories, cohabiting with dependants and singles are more affected by the reform than cohabiting. Indeed, while cohabiting faced already before the reform a reduction over time of their unemployment benefits (through the third period of unemployment), the two other categories never entered the third period, which means that they benefited from an unlimited second period of unemployment without digressive unemployment benefit. The reform introduces the third period of unemployment for all unemployed categories and reduces lengths of the first and second periods. The impact of this reform is therefore less important for the cohabiting than for cohabiting with dependants and singles: while the former face only a faster reduction in time of their unemployment benefits than before, the latter two now face a reduction over time of their unemployment benefits, decreasing towards a lump sum benefit in third period.

3. Simulating the impact of social security reform: a tale of many models

The above-described social security reform has an impact on the sustainability of the system. But it also might affect its adequacy, since the two aspects are two sides of the same coin. The assessment of sustainability may therefore not be very meaningful without considering current or prospective developments in adequacy, and vice versa. A previous study made an assessment of pension adequacy consistent with the AWG-projections in an international comparative perspective (Dekkers et al., 2010). More recent work (De Vil et al., 2010; Dekkers et al, 2012, Study Committee for Ageing, 2012, and this paper) apply a semi-aggregate model and a dynamic microsimulation model in simulating the impact of pension reform, thereby jointly assessing the budgetary consequences as well as the impacts on poverty and income inequality among the elderly in Belgium.

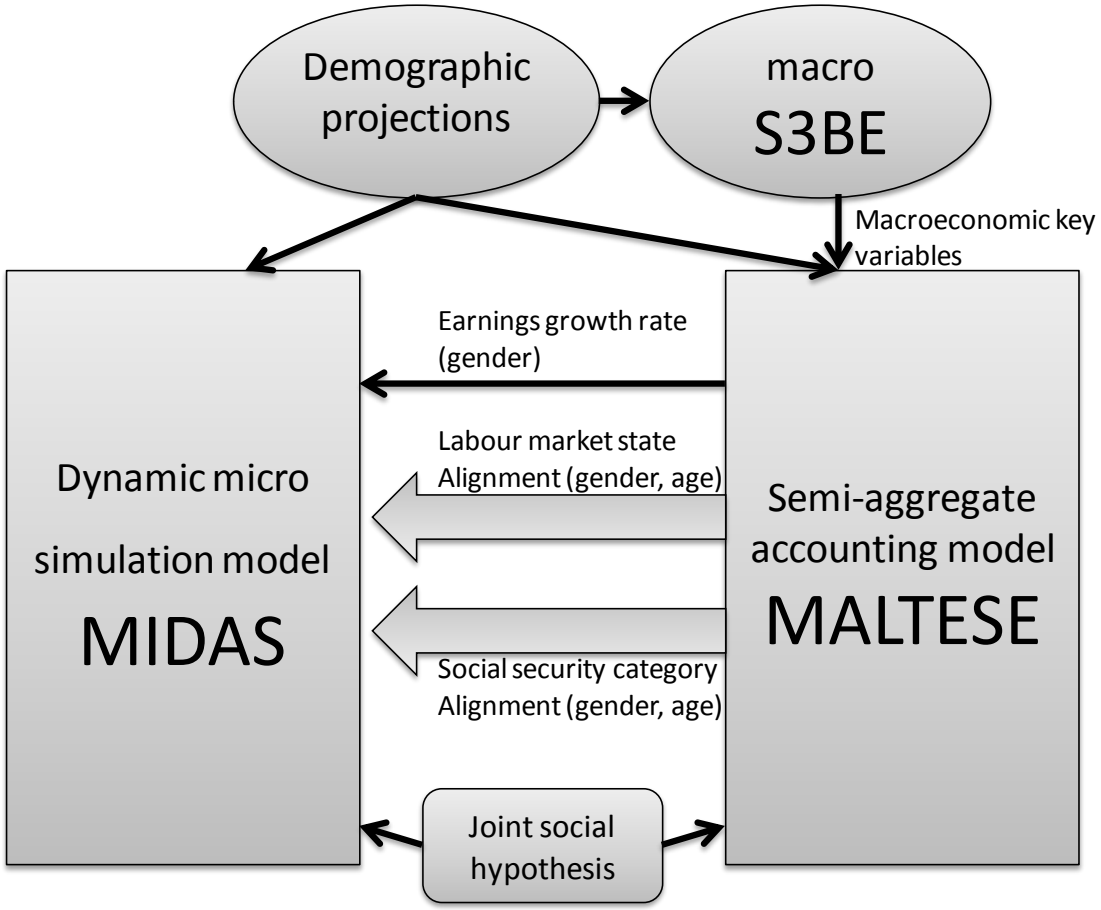
The model used for the assessment of the budgetary consequences of ageing and pension reform is MALTESE[vi] (Model for Analysis of Long-Term Evolution of Social Expenditure). This is a composition of interdependent semi-aggregate models, around one central model. The global accounting frame of the system relies on the national accounts. The various models are accounting models designed for translating demographic projections into budgetary developments like social security account and overall public finance account. Special attention is paid to modelling social expenses according to the calculation rules (legislation), often by scheme, gender, age and categories for the number of beneficiaries (new and other) and the corresponding average benefits. The latter takes into account ceilings, minimum rules, indexation rules, et cetera.

The adequacy of pensions is assessed through the dynamic microsimulation model MIDAS (an acronym for 'Microsimulation for the Development of Adequacy and Sustainability'). Technically speaking, MIDAS is a dynamic population model with dynamic cross-sectional ageing. Starting from a cross-sectional dataset representing a population of all ages at a certain point in time, the model simulates the life spans of individuals in the dataset, including with their interactions, for the years between 2002 and 2060. The latest version of the model used here, is being developed, tested and validated on a dataset of 300,000 individuals. The actual simulation runs are based on an expanded version of this dataset, being 2.2 million individuals or one-fifth of the Belgian population (De Menten et al., 2012).

Summarizing, where macro simulation considers averages, a micro simulation model attempts to take into account the heterogeneity behind the average. This allows for capturing the complex and often nonlinear interactions of government policies with the distribution of individuals and households.

Now a joint assessment on the basis of both models requires that they are capable to produce consistent simulations. MIDAS has an extensive alignment procedure, which allows it to be consistent with exogenous semi-aggregate projections and assumptions; in this case separating gender- and age-groups as produced by the MALTESE model. The methodology used is known as "alignment by sorting" (Li, 2011, Chapter 4). This procedure separates the a priori risk of being in a state for an individual from the proportion of states over all individuals. At first, individuals are ranked according to their risk of being observed in the designated state. Next, the alignment procedure takes the first x%, where x is an exogenous deterministic mortality rate, and marks them in that state. This alignment

procedure is one 'channel of consistency' between the microsimulation model MIDAS and the semi-aggregate model MALTESE. The other three channels are the demographic projection, the development of wages, and the use of common social policy hypothesis. All the channels are shown in Figure 1.



A first input – and a first channel of consistency- pertains to demographic information. Starting from a detailed population database, the population projection rests on three demographic assumptions: the fertility rate, the life expectancy and the migration (see Table 1 which illustrates the main assumptions of the long-term base scenario). The resulting population numbers are a starting point in MALTESE (cf. infra). Furthermore, the fertility and mortality probabilities are the point of departure of the alignment procedures in MIDAS[vii].

After having projected the participation rates and the labour force by a cohort approach, the macroeconomic scenario is then elaborated using the structural model S3BE ('Small Supply-Side model for the Belgian Economy'). Assuming a CES production function with labour and capital as inputs, labour-augmenting technical progress and constant returns to scale, past trends in labour market efficiency gains are used to compute the evolution of the structural unemployment rate. Next, given the unemployment rate trajectory, the development in the labour force and an assumed total factor productivity growth, employment and GDP are determined simultaneously (Lebrun, 2009).

These are inputs for the MALTESE model. It is also the second channel of consistency between MIDAS and MALTESE. MALTESE uses the exogenous productivity development to simulate earnings growth. MIDAS uprates the earnings on the micro-level in such a way that the productivity growth rates used in MALTESE are replicated for men and women separately. As a result, both MALTESE and MIDAS adopt the actual development of wages between 2002 and 2011, and the mid-term projections 2012-2017 of the Federal Planning Bureau (2012). For the years up to 2018, the joint assumption is that the average wage growth rate converges gradually to its long-term level, which is 1.5% p.a. (see Table 1).

Table 1Main assumptions

Demographic assumptions (« Population projection 2011-2060 »)			
	2011	2030	2060
Fertility rate	1,84	1,86	1,86
Life expectancy at birth : men	78,2	81,9	86,2
Life expectancy at birth : women	83,4	85,8	88,8
Net migration flow in thousands	63,0	23,4	31,9

Socio-economic assumptions	
Education rate	Maintained at the level of the most recent observations for those under 15 or function of the evolution of the participation rate of those 15 and older
Participation rate and transition from active status to disability, unemployment with company allowance (UCA) and retirement	Modelling which applies to the successive generations probabilities of transition from one socioeconomic category to another, by gender and age group, and taking into account the effects of the already approved reforms

Macroeconomic assumptions	
Mid-term	Long-term base scenario
Following the « Economic Forecasts 2012-2017 » of the FPB where:	
Productivity growth between 2011 and 2017 : 0,8% per year	Productivity growth 1,50%
Unemployment rate in 2017 : 11,9%	Structural long term unemployment rate 8,0%
Employment rate in 2017 : 65,4%	

Social policy assumptions		
2011-2012 :	From 2015	
Existing legislation (measures of the social partners and the government)	Wage ceiling	1,25%
	Minimum claim per working year	
	Non flat rates (general scheme)	0,50%
2013-2014 :	Flat rates and minima	1,00%
Governmental agreement of December 2011		

Source: High Council of Finance, Study Committee for Ageing, Yearly Report 2012

As already said, MALTESE model uses a cohort approach to split the given population projection into the school population, the labour force, the disabled persons and the others (as a residual), by gender and age. This is based on transition probabilities, behaviour in recent years and includes impacts of reforms[viii]. Based on this data, the population is then further subdivided to labour market states (employment by schemes, unemployment, full-time career breaks, CELS/UCA) and inactive states such as retirement, and this specific for age and gender categories. Through the aforementioned alignment techniques, the microsimulation model MIDAS replicates these tables, to age and gender.

Finally, a third channel of consistency between the two models is introduced via the use of common social policy hypothesis on the intertemporal development of social security benefits and the various parameters, minimum benefits, floors and ceilings (see Table 1). See a.o. Dekkers et al. (2012) and De Vil et al. (2010) for a more extensive discussion.

Even though much effort has been put in the consistency between the two models, some differences remain that are fundamental to the two models. These differences pertain to the level of modelling and the start datasets of the two models. The semi-aggregate model MALTESE is based on a variety of meso- and macro-level data, including national accounts data. The microsimulation model, on the other hand, starts from a representative administrative sample of 300,000 actual individuals and their households, which is then extended using the sample weight to a sample of about 2.2 million individuals in 2001. Thus, especially in the short- and middle- term, where simulation results are to some extent the result of retrospective information, the observed trends may differ.

4. The budgetary impact of the structural reforms

This section presents the budgetary impact of the recent pension reform (including the early retirement reform) and the impact of other, simultaneously decided, restrictive measures with regard to unemployment benefits and access conditions for career breaks and time credit. The tables in this section illustrate, on the one hand, the evolution of the base projection which includes the structural reforms and, on the other hand, the impact of those reforms by comparing the base projection with a projection without reform. Besides the impact on social expenditure, the reforms also affect the labour market and the macroeconomic indicators.

4.1. Labour market and macroeconomic environment

Without the reform, the labour market hypotheses imply a context of increasing participation and employment rates in the projection. The structural reforms reinforce this favourable development in the long run: compared to a situation without reform, the global participation rate is raised by 1 percentage point and the participation rate of the age category 55-64 increase by 6.2 percentage points by 2060 (Table 2). In the base projection (including the reforms), the global participation rate and the participation rate of older workers/reach 74.5% and 64.9%, respectively, in 2060.

Table 2 Labour market: base scenario (with reform) and impact of the structural reforms (difference between projection with and without reform in percentage point) – Administrative definition

	Base scenario (with reforms)			Impact of reforms	
	2011	2030	2060	2030	2060
Participation rate *(labour force[a] in % of population 15-64 years)*	72.7	74.2	74.5	1.0	1.0
15-54 years	76.5	75.6	75.6	-0.2	-0.1
55-64 years	52.9	64.0	64.9	5.8	6.2
Employment rate *(total employment in % of population 15-64 years)*	64.0	68.0	68.5	0.9	1.0
15-54 years	68.3	70.0	70.2	-0.2	-0.1
55-64 years	42.0	55.1	56.3	5.2	5.6
Unemployment rate *(unemployment in % of labour force[a])*	11.9	8.5	8.0	0.1	0.0
CELS/UCA rate *(% of potential labour force[b] 50-64 years)*	8.0	5.9	5.6	-1.5	-1.5

Source: High Council of Finance, Study Committee for Ageing, Yearly Report 2012

a. labour force = total employment + unemployment.

b. potential labour force = labour force + CELS/UCA + full-time career breaks and time-credit.

Assuming that the reforms do not affect the structural unemployment rate (8%), employment should, in the long run, have a similar evolution as the labour force. Compared to a scenario without reform, the global employment rate is raised by 1 percentage point and the employment rate of the age

category 55-64 by 5.6 percentage points by 2060. In the reference simulation, the global employment rate and the employment rate of those aged 55-64 amount to 68.5% and 56.3%, respectively.

Table 1 shows that annual labour productivity growth amounts to 1.5% in the long run in the base scenario (from about 2030 on). However, Table 3 shows that, over the period 2011-2060, productivity gains only add up to 1.3% annually on average as a result of a weaker productivity growth in the short to medium term. Between 2011 and 2060, GDP grows by 1.7% per year on average and employment by 0.3% per year (see Table 3).

Table 3 Macroeconomic projection: base scenario (with reform) and impact of the structural reforms (difference between projection with and without reform in %

	Base scenario (with reforms)			Impact of the reforms				
	Average annual growth rates in real terms in %						Level in %	
	2011-2030	2030-2060	2011-2060	2011-2030	2030-2060	2011-2060	2030	2060
GDP	1.6	1.7	1.7	0.07	0.00	0.03	1.3	1.4
Productivity	1.1	1.5	1.3	0.00	0.00	0.00	0.0	0.0
Employment	0.5	0.2	0.3	0.07	0.00	0.03	1.3	1.4

Source: High Council of Finance, Study Committee for Ageing, Yearly Report 2012

In the long term, employment growth owing to structural reforms implies an economic growth which is slightly higher than in a scenario without reform: 0.03% annually over the period 2011-2060 (see Table 3). In 2060, GDP should be 1.4% higher than in a scenario without reform.

4.2. Social expenditures

The next table presents the budgetary cost of ageing, or the variation of the whole social expenses expressed in percent of GDP between two years, firstly for the base scenario which includes the reforms (in the left side of the table). In the base-scenario, the social expenses would rise from 25.3% of GDP in 2011 to 31.4% of GDP in 2060, or a budgetary cost of ageing of 6.1 percentage points of GDP between 2011 and 2060. The costs of pensions and health care would increase by 7.6 percentage points of GDP, but the other expenditures (especially unemployment benefits and children benefits) would decrease by 1.5 percentage points of GDP.

Table 4 Budgetary costs of ageing: base scenario of the Study Committee of Ageing (with reform) and impact of the reforms (difference between projection with and without reform), October 2012
% of GDP

Components of the budgetary costs	Base scenario (with reforms)				Impact of reforms	
	2011	2030	2060	**2011-2060**	2011-2030	**2011-2060**
Pensions	9.9	13.6	14.5	**4.6**	-0.2	**-0.1**
- wage-earners	5.4	7.6	7.8	**2.5**	-0.2	**-0.1**
- self-employed	0.8	1.0	1.1	**0.3**	0.0	**0.0**
- civil servants	3.7	5.0	5.6	**1.8**	-0.1	**0.1**
Health Care[a]	8.0	9.4	11.0	**3.0**	0.0	**0.0**
Disability schemes	1.6	1.6	1.5	**-0.1**	0.0	**0.0**
Unemployment[b]	2.0	1.3	1.1	**-0.9**	-0.1	**-0.1**
CELS/UCA	0.4	0.3	0.3	**-0.2**	-0.1	**-0.1**
Children benefits	1.6	1.6	1.4	**-0.2**	0.0	**0.0**
Other social expenditures	1.7	1.7	1.6	**-0.1**	0.0	**0.0**
Total	25.3	29.5	31.4	**6.1**	-0.5	**-0.3**

Source: High Council of Finance, Study Committee of Ageing, Yearly Report 2012
a. Public expenditure, inclusive long-term care.
b. Inclusive time credit and career breaks

The impact of the structural reforms on the budgetary costs of ageing is further discussed by comparing the budgetary costs of ageing in percent of GDP including and excluding reform (the right side of Table 4). The structural reforms of December 2011 reduce the budgetary cost of ageing by 0.3 percentage point of GDP between 2011 and 2060, evenly distributed between pensions, unemployment and CELS/UCA. Besides the direct impact of the measures themselves, the increased GDP that results from the reform of course decreases the weight of the social expenses in percent of GDP.

4.2.1. Unemployment, career break and conventional early leavers' scheme

The average benefit level of the CELS/UCA is unaffected by the reform. The decrease in the expenses due to the reform therefore comes from the reduction of the number of CELS/UCA beneficiaries: in 2060, almost 22 000 people, or 18% of the number of beneficiaries without reform, do not have access to this regime anymore, be it temporarily of definitively. Expenditure for unemployment and career breaks should also drop by 0.1 percentage point of GDP. This decrease results from, on the one hand, more strict access conditions for career breaks which lower the number of eligible persons, and, on the other, a decrease of average benefits due to the more outspoken decrease of the unemployment benefit with increased duration of the unemployment spell, and to the raised eligibility age for a seniority supplement.

4.2.2. Pension schemes

Table 4 shows that the impact of the reform reduces pension expenses by 0.1 percentage point GDP between 2011 and 2060 only. Of course, the reform translates into a decrease in the number of

pensioners (almost 66 000 people in 2060 or 1.7% of the total number of pensioners) which reduces pension expenditures in terms of GDP. Inversely, however, these expenditures themselves are increased by higher average pension benefits.

The results in Table 4 are expressed in % of GDP. As the latter increases as a result of the reform, the budgetary impact is cet. par. reduced. To keep this effect out of the discussion, the percentages expressed in the below sections are based on the expenditure amounts in euro in the scenarios with and without reform.

During the transition period, expenditure reductions are realized in the three pension schemes by a drop in the number of retirements, as career and age conditions are raised progressively until 2016. Civil servants are to postpone their retirement for a relatively longer period since, contrary to wage earners and the self-employed, they previously were not subject to a condition for early retirement. When the people who initially had to postpone their retirement actually will retire, they will receive a higher average pension benefit, mainly because of a longer career compared to the situation before the reform. The extent to which the average pension increases and whether these two effects cancel each other out, differs between schemes. On the whole, expenditures in the wage earners' scheme, are reduced. But in the self-employed scheme and especially the public sector, expenditures grow compared to a scenario without reform.

a. Wage earners' scheme

In the wage earners' scheme, the increase of average pensions – as a result of longer careers – amply compensates for the negative impact of the less favourable valuation of certain equivalent periods. Furthermore, the hypothesis that the modalities of the current pension bonus[ix] are maintained until the end of the projection period leads to a higher bonus and, thus, to a higher average pension. The government has already announced a pension bonus reform to tune it to the pension reform, thereby only granting a bonus if the career condition for early retirement is met and work is continued.

b. Self-employed scheme

In the self-employed scheme, the increase of average pensions should more than compensate for the savings which result from the smaller number of pensioners, owing to longer careers and a higher pension bonus (see also wage earners' scheme) in the longer term, and lead to additional expenditure. Particularly in the self-employed scheme, career extension leads to a higher number of, mainly female, pensioners who meet the conditions for a minimum pension, which in its turn raises the average pension. Moreover, the increased flexibility of the penalty system contributes to higher average pensions for new pensioners. By 2060, pension expenditure for the self-employed should be 0.5% higher than in a scenario without reform. But, when expressed in percentage of GDP as shown in Table 4, this increase is cancelled out.

c. Civil servants' scheme

Additional expenditure by the year 2060 is also projected in the civil servants' scheme: 3.7% more than in a scenario without reform, or 0.1 percent point if the increase of GDP is taken into account.

Compared to wage earners or the self-employed, civil servants are to postpone their retirement for a longer period because of insufficient career years. This career extension leads to a higher average pension. Moreover, as a result of retirement at a higher age, more pensioners benefit from a (higher) age supplement[x]. Granting this age supplement is responsible for almost 50% of the additional expenditure compared to a scenario without reform. The government has already announced an age supplement reform.

5. The social impact of reform

This section starts with a caveat. The below figures show the impact of pension reform on pensioners and of unemployment reform on the unemployed. The change of a benefit however affects the equivalent household income of the household of the beneficiary and therefore changes the poverty risk of all the members of the household. As Figures 2 and 3 shows the impact of reform for pensioners, and Figure 5 shows the impact of unemployment reform for unemployed, both figures ignore the indirect impact on non-beneficiaries. We have however chosen to limit the discussion to beneficiaries in order to visualize the impact of the reform measures.

5.1. Impact of pension reform on the poverty risk of the pensioners

This recent social security reform is mainly a pension reform. This section will therefore analyse the impact of this reform on the adequacy of pensions first. The main indicator analysed is the risk of poverty rate of retirees. The global impact of the reform can be seen in Figure 2. The risk of poverty rate of retirees decreases progressively as a result of the reform. In 2060, the reduction reaches 4 percentage points. The progressivity of this reduction indicates that the impact of this reform on poverty operates mainly in the long run.

Figure 2: Risk of poverty rate of retirees – Comparison between a scenario with structural reforms and a scenario without structural reforms, in percent

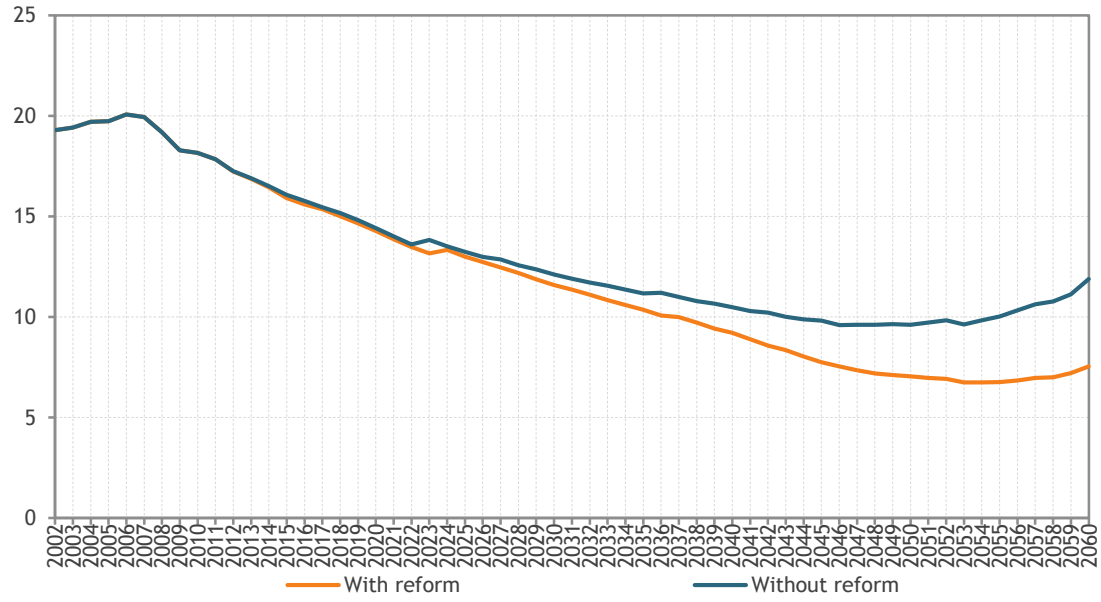


Figure 3 presents the impact of the reform on the poverty of retirees differentiated by gender. For men, the decrease of poverty rate appears immediately after the introduction of the reform. With more restricted eligibility conditions for early retirement, individuals are stimulated to postpone retirement. Consequently, as career length increases, retirement benefits increase as well.

In 2060, the poverty rate reduction of retirees reach almost 4 percentage points for men and almost 5 percentage points for women. Even if, in absolute terms, this decrease is slightly higher for women, when we consider the variation of poverty in relative terms, the decrease is largely more important for men (-50%) than for women (-30%).

Furthermore, Figure 3 shows that the reduction of the poverty risk as a result of the reform sets off almost a decade later for women than for men.

Figure 3 : Risk of poverty rate of retirees by gender – Comparison between a scenario with structural reforms and a scenario without structural reforms, in percent

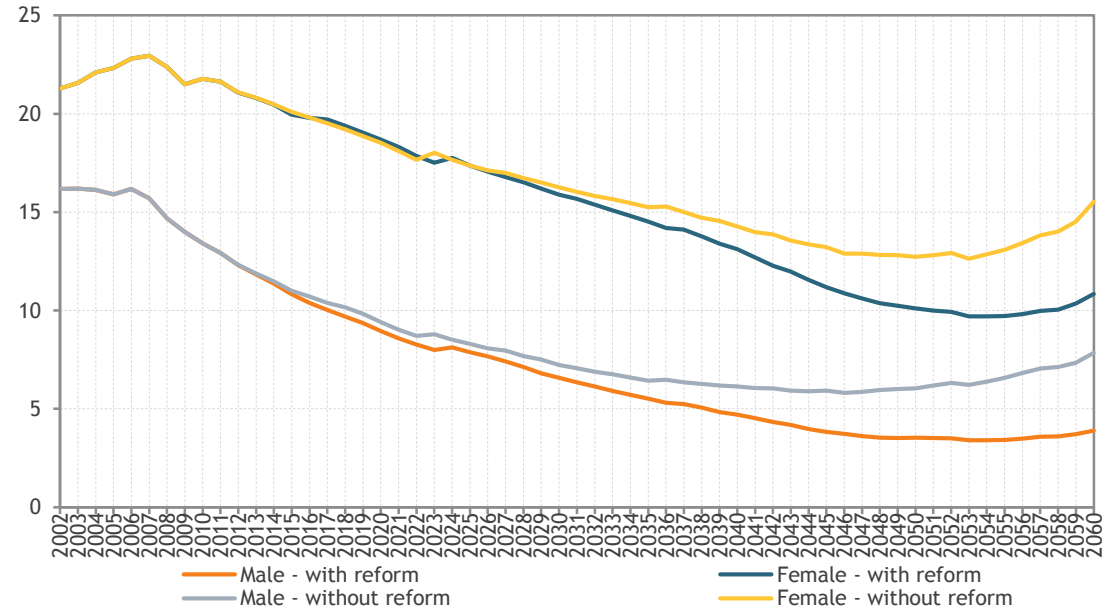
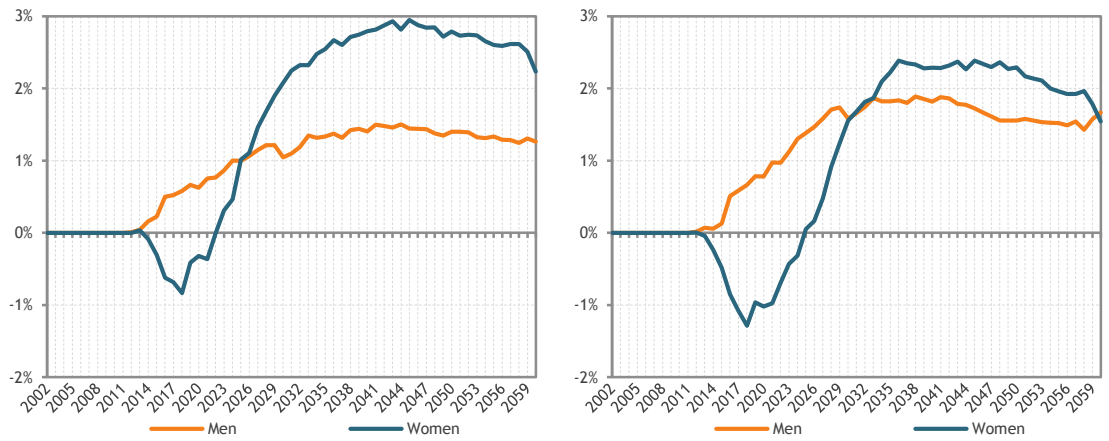


Figure 4 allows better understanding the various impacts of the pension reform. Its left panel presents the evolution of the average retirement benefit by gender while its right panel shows the evolution of the average equivalent income of pensioners by gender. The differences observed in the right panel of Figure 4 obviously results from single men and women pensioners, as well as from pensioners whose partner is not retired. That the differences in the long-run are more outspoken in the left than in the right panel is due to the redistribution of the impact of the reform between household members. The comparison of these two figures allows, in addition to explaining the evolution of poverty rates, understanding the role of household composition and income composition into households. To facilitate the discussion of Figure 4, it is useful to discern three groups of workers. Those with a very short career and those with a very long career are for opposite reasons unaffected by the reform; the former because they do not meet the requirements for early retirement before as well as after reform, and the latter because they do. The first group consists mainly of women whereas men are overrepresented in the latter group. It is the third group, those with a 'middle' career length that have

to postpone their retirement because of the reform. Next we turn to the discussion of Figure 4. In stark contradiction to men, both the average retirement benefit and the average equivalent income decrease for women in years following the introduction of the reform. Even if this reform incites people to work more, wage-earners and self-employed who were not eligible for early retirement before the reform are by definition not impacted by the reform, since this makes the conditions for early retirement more strict. They therefore continue to work, as in the situation without the reform, until the normal retirement age of 65. As said, women are proportionally overrepresented in this group. Therefore, during the years directly following the introduction of the reform and compared to the situation without reform, as only women with mid-length careers are forced to postpone their retirement as a result of the reform, those women wage-earners and self-employed who do enter retirement at 65are mainly those with short careers. This overrepresentation leads to lower retirement benefits for newly retired women in the reform scenario and in the short run.

Figure 4 : The average net retirement benefits of pensioners, by gender (left panel) and average net equivalent income of pensioners, by gender (right panel), difference with scenario without reform in percent.



The selection effect in the short run where mainly women with a short career remain unaffected by the reform whereas others postpone retirement results in the somewhat paradoxal situation that the average career length of women decreases while their average age at retirement increases. This negatively affects the average net retirement benefit of women pensioners, and thus reduces the equivalent income of retired women.

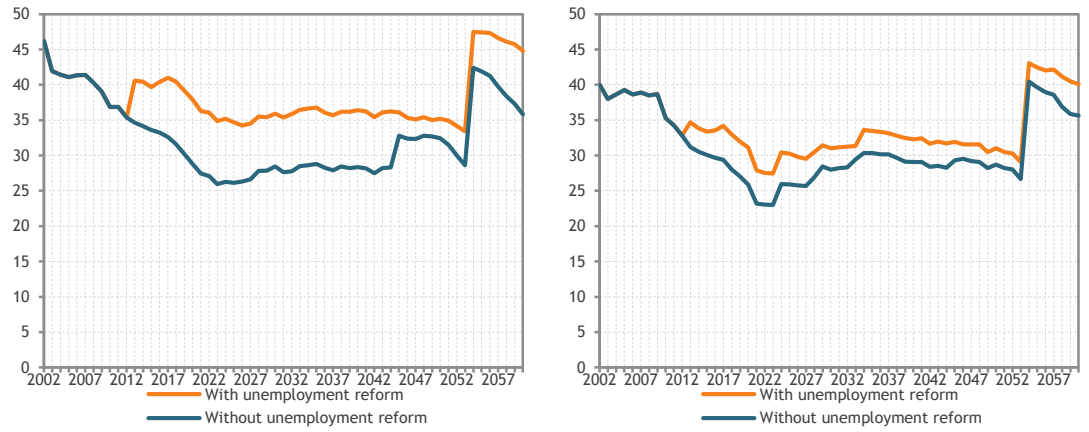
For men of various subsequent cohorts, the distribution of the length of the career is more or less stable and high. Thus the number of men entering in retirement from being in work each year will be lower as a result of the reform. For women, on the contrary, the average length of the career is currently considerably lower and expected to increase with time. As a result, the reform will prevent many women to enter into retirement in the short run. Those small numbers of women that will retire, will have careers short enough not to be affected by the reform. When the women affected by the reform will finally become eligible for retirement, there will be a catching-up and many women will enter retirement in a relatively short time span, having a considerably longer career than their predecessors. The reform therefore has a stronger impact on women than on men.

5.2. The impact of unemployment reform on the poverty risk of the unemployed

Figure 5 compares the poverty risk among unemployed in the reform scenario with the non-reform scenario. Before proceeding, a caveat must be highlighted. In the current version of MIDAS, the income from savings, capital or occupational pension systems are not taken into account. As a result, the poverty threshold of 60% of median equivalent income is lower than the SILC poverty line. This reveals itself specifically in a considerably lower poverty risk among the unemployed in the model than resulting from the SILC data. In order to approach the actual poverty risk and therefore to be able to capture the impact of the reform of the unemployment system, the below results are based on a poverty threshold equal to 70% of the median equivalent income.

Figure 5 hence shows the impact of reform of the unemployment system on the unemployed and immediately shows that the poverty risk increases as a result of the reform, an impact which is more important for men than for women.

Figure 5: Risk of poverty rate of unemployed computed at 70% of the equivalent income, by gender (men on the left and women on the right)



To understand this difference in impact, one must recall the differences in reform for various categories of beneficiaries, as well as how men and women are distributed among these categories. There are 3 types of unemployed: those that are living with dependent household members, those that are living with not-dependent household members and single unemployed. Of these three categories, the first and the last are particularly affected by the reform of the unemployment system. The poverty risk of the unemployed with dependent household members and single unemployed therefore increases considerably, whereas the impact of reform is limited for the unemployed living with non-dependent household members. Another reason for this impact is that, almost by definition, the latter category of unemployed benefits from the (unchanged) contributions of the non-dependent household members to the equivalent income of the household, which is not the case for the other two categories of unemployed.

Official statistics from the National Employment Office (Office national de l'emploi ONEM) show that men are overrepresented among the unemployed that live with dependent-household members and among the single unemployed. Women, on the other hand, are overrepresented among the unemployed

living with non-dependent household members. As a result, Figure 5 shows that the reform of the unemployment system has a more important impact on male unemployed compared to female unemployed.

6. Conclusion

This paper discusses the impact of recent reform of the pension system, including the conventional early leavers' scheme, the general unemployment scheme on the development of sustainability as well as adequacy in Belgium. The impact analysis follows earlier work by Dekkers, Desmet and Inagaki (2012) in demonstrating how two separate yet consistent models can be used in unison to assess the budgetary impact and the adequacy impact of social security reform.

The structural reforms of December 2011 reduce the budgetary cost of ageing by 0.3 percentage point of GDP between 2011 and 2060, evenly distributed between pensions, unemployment and CELS/UCA. Besides the direct impact of the measures themselves, the increased GDP that results from the reform of course decreases the weight of the social expenses in percent of GDP.

The risk of poverty rate of retirees decreases progressively as a result of the reform. In 2060, the reduction reaches 4 percentage points (4 percentage points for the men and 5 percentage points for the women) Furthermore, the poverty risk of especially male unemployed increases considerably.

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[i] Despite the somewhat exceptional political circumstances, the timing of this reform as well as the arguments to legitimate it are broadly in line with the conclusions that Fernández (2012) draw on the basis of the study of pension retrenchments in 19 OECD countries.

[ii] Together with old age pensions, they also include survivor's pensions, the GIEP and "availability before retirement" for teaching personnel. Pensions of public companies are also taken into account.

[iii] Detailed transitional measures, even though included in the models, will not be discussed. They might however be mentioned later if relevant in explaining simulation results.

[iv] Specifically, this concerns civil servants in the regime "with tantième 1/60". The other regimes of civil servants are also subject to reform, but with other transitional periods and career length conditions.

[v] The Di Rupo government has since then decided to abandon this penalty system altogether from 2014 on. As this was unknown at the time of implementing and simulating the reforms, the impact of this decision is not taken into account.

[vi] This discussion is based on section 2.2.3. of Dekkers et al. (2010b), and Fasquelle et al. (2012)

[vii] In its current version, MIDAS does not yet simulate immigration or emigration.

[viii] See Fasquelle et al. (2012) for a detailed discussion.

[ix] A pension bonus of € 2.2 (prices on 1/2/2012) per day of actual service is granted to wage earners and self-employed which continue to work after the age of 62 or after a career of at least 44 years. According to the law, the bonus entered into effect on 1/1/2007 and ends on 1/12/2013.

[x] Since 1/1/2001, an age supplement is granted to civil servants who continue their career after the age of 60. The age supplement increases with the age and amounts to 1.5% of the pension for retirement at 61, running up to 9% of the pension for retirement at 65.